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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,188	07/10/2003	Daniel Iancu	29083/40711	3524
23646	7590	11/22/2006	EXAMINER	
BARNES & THORNBURG LLP			WANG, TED M	
750-17TH STREET NW			ART UNIT	
SUITE 900			PAPER NUMBER	
WASHINGTON, DC 20006-4675			2611	

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,188

Applicant(s)

IANCU ET AL.

Examiner

Ted M. Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 8, 10-23, 25, 27 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 3, 10-20, 22 and 29-31 is/are allowed.
- 6) ☒ Claim(s) 2, 4, 6, 8, 21, 23, 25 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, filed on 09/21/2006, with respect to the rejection(s) of claim(s) 1-4, 6, 8, 10-23, 25, 27 and 29-31 under 35 USC § 112 second paragraph has been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made as following.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2, 4, 6, 8, 21, 23, 25 and 27 are rejected under 35 U.S.C. 112 second paragraph, because there is indefinite term for this limitation in the claim.

- Claims 2, 4, 21 and 23, the limitation of "for a Doppler increased frequency" is indefinite since it is not clear that the limitation as recited is referred to a specific Doppler increased frequency previously presented or any other Doppler increased frequency.
- Claims 6, 8, 25 and 27, the limitation of "for a Doppler decreased frequency" is indefinite since it is not clear that the limitation as recited is referred to a specific Doppler decreased frequency previously presented or any other Doppler decreased frequency.

### ***Allowable Subject Matter***

1. Claims 1, 3, 10-20, 22 and 29-31 are allowed.

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4. Claims 2, 4, 6, 8, 21, 23, 25 and 27 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

5. The following is an examiner's statement of reasons for allowance.

- The prior art fails to teach an apparatus of Claims 1 and 20 that specifically comprises the following:

- The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the invention patented in Pat. No. US 5,130,952, US 5,719,944, US 5,732,044 and US 6,633,617. The improvement comprises that

With regard claims 1 and 20, "prior to demodulating the sampled digital signal, compensates for a Doppler increased frequency by decreasing a cycle of m samples by one sample period every n samples and compensates for a Doppler decreased frequency by increasing the cycle of m samples by one sample period every n samples." as recited in combination with other limitation as claimed in the claims 1 and 20, respectively.

US 5,130,952, US 5,719,944, US 5,732,044 and US 6,633,617 teach a Doppler compensation method with oversampling the Doppler shifted incoming signal and then computing a factor for a decimator to down- sampling the over-sampled Doppler shifted signal to remove or

compensate the Doppler shift. None of them, individually or in combination, teaches above features.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M. Wang



Ted M Wang  
Examiner  
Art Unit 2611